Lead Production

Proposed Rule: Mandatory Reporting of Greenhouse Gases

United States Environmental Protection Agency

Under the proposed Mandatory Reporting of Greenhouse Gases (GHGs) rule, owners or operators of facilities that contain lead production processes (as defined below) and that emit 25,000 metric tons of GHGs per year or more (expressed as carbon dioxide equivalents) from stationary combustion, miscellaneous use of carbonates, and other source categories (see information sheet on General Provisions) would report emissions from all source categories located at the facility for which emission calculation methods are defined in the rule. Owners or operators would collect emission data; calculate GHG emissions; and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting.

How Is This Source Category Defined?

Under the proposal, the lead production source category consists of primary lead smelters and secondary lead smelters. A primary lead smelter is a facility engaged in the production of lead metal from lead sulfide ore concentrates through the use of pyrometallurgical techniques (smelting). A secondary lead smelter is a facility at which lead-bearing scrap materials (including but not limited to lead-acid batteries) are recycled by smelting into elemental lead or lead alloys.

What GHGs Would Be Reported?

The proposal calls for lead production facilities to report the following emissions:

- Carbon dioxide (CO_2) process emissions from each smelting furnace used for lead production as required by this subpart.
- CO_2, methane (CH_4), and nitrous oxide (N_2O) emissions from fuel combustion at each blast furnace, rotary furnace, and reverberatory furnace, and at each stationary combustion unit by following the requirements of 40 CFR part 98, subpart C (General Stationary Fuel Combustion Sources). The information sheet on general stationary fuel combustion sources summarizes the proposal for calculating and reporting emissions from these units.

In addition, each facility would report GHG emissions for any other source categories for which calculation methods are provided in other subparts of the rule.

How Would GHG Emissions Be Calculated?

For CO_2 emissions from each smelting furnace, the proposal calls for facilities to use one of two methods as appropriate:

- Lead smelting furnaces with certain types of continuous emissions monitors (CEMS) in place would report using the CEMS and follow the methodology of 40 CFR part 98, subpart C to report total CO_2 emissions from calcination and fuel combustion. At other lead smelting furnaces, the use of CEMS would be optional.

- Facilities without CEMS would calculate CO_2 process emissions on the basis of monthly consumption of reducing agents and other carbon containing inputs using the following measurements:
    - Total mass of each carbon-containing material (including ore, scrap, flux materials, carbonaceous materials, coke for blast and other smelting furnaces, and any other material) that is fed, charged, or otherwise introduced into each smelting furnace for each calendar month.
    - Mass fraction of carbon in each carbon-containing material other than fuel that is fed, charged, or otherwise introduced into each smelting furnace used. Coke used in blast and/or smelting furnaces is included as a feedstock rather than as a fuel in this mass-balance procedure. The mass fraction would be determined either from information provided by the material supplier or by monthly measurements of a representative sample of carbon-containing materials.

What Information Would Be Reported?

In addition to the information required by the General Provisions at 40 CFR 98.3(c), the proposal calls for each lead production facility to report the following information:

- Total annual CO_2 emissions from each smelting furnace (metric tons) and the method used to estimate these emissions.
- Annual facility lead production capacity (metric tons).
- Annual facility production quantity (metric tons).
- Number of facility operating hours per calendar year.
- If the facility uses the carbon input mass-balance procedure, it would report the following information for each carbon-containing input material consumed or used (other than fuel) in the smelting furnaces:
    - Annual material quantity (metric tons).
    - Annual weighted-average carbon content, based on monthly carbon analysis, determined for each material and the method used for the determination (e.g., supplier provided information, analyses of representative samples collected).

Facilities that use CEMS would also report the data specified in 40 CFR 98.34(d) of subpart C (General Stationary Fuel Combustion Sources).

For More Information

This series of information sheets is intended to assist reporting facilities/owners in understanding key provisions of the proposed rule. However, these information sheets are not intended to be a substitution for the rule. Visit EPA's Web site (www.epa.gov/climatechange/emissions/ghgrulemaking.html) for more information, including the proposed preamble and rule and additional information sheets on specific industries, or go to <www.regulations.gov> to access the rulemaking docket (EPA-HQ OAR-2008-0508). For questions that cannot be answered through the Web site or docket, call 1-877-GHG-1188.